

no one who had ever seen more than a single bush or who regarded it otherwise than as a curiosity.

The plant which I found grew in a partially cleared woodland which contained an abundance of the common high blackberry, but careful search revealed no other bush of the *albinus* variety. The white berries are reported as having been seen in a mountain pasture two or three miles from where I found this bush and in the adjoining town of Chesterfield.

As I could find no report of any such blackberry in the works of reference which I had at hand, I wrote to Harvard inquiring if any record had been made of them. I was requested to send some of the fruit for preservation at the Botanical Museum at Cambridge, with some of the leaves and stem for use at the Gray Herbarium. The plant was identified as the one described by Professor Bailey as the *albinus* variety of *Rubus nigrobaccus*, but not hitherto reported from New England.

The fruit in alcohol has been deposited on the shelves of the Botanical Museum, and the fruit together with the stem and leaves preserved at the Gray Herbarium. The bush has been carefully marked and effort will be made to secure some of the flowers another season.

#### ADVENTITIOUS PLANTS OF DROSERA.

ROBERT G. LEAVITT.

(Plate 10.)

THE propagation of *Drosera filiformis*, *D. binata* and *D. dichotoma* from cut leaves was noted by Mr. Ames in the September RHODORA. From leaves placed in sphagnum August 5, new plants were first observed August 26. These shoots, the present aspect of which merits a note, have reached a point at which the leaves first produced and those characteristic of the species are seen standing together and offering in the same plantlet marked contrasts, as well as gradations, of form. The peculiarities may be gathered from the accompanying plate.

Figures 1-4 represent, enlarged, the young condition of *D. binata*. In 1 we have a shoot with the first six leaves, all orbicular and indistinguishable except in size from those of *D. rotundifolia* (fig. 6). Leaf 4*a* is rotund, 2 is later and sub-triangular, 3 later still and obreniform, 4*b*, *c* and *d* succeeding forms; *d*, though small, is practically the full character leaf. Fig. 5 represents the first five leaves (enlarged) of *D. filiformis*.

It must not be supposed, of course, that any individual leaf changes from rotund to binate. The forms represented are permanent. Mature plants, however, would not show the peculiarities now under discussion.

The phenomenon here presented, well known in seedlings, is worth notice for two reasons, first because of its bearings on the probable affinities of the species of *Drosera*, and secondly from its relation to the problem of heredity.

The studies of Dr. R. T. Jackson have shown stages of development in flowering plants, manifested in the shapes of the leaves, which are almost as striking from a genealogical standpoint as the steps of development which give rise to the embryo within the embryo-sac. Dr. Jackson's palaeobotanical researches have established the fact that in the leaves of the seedling we may often trace something of the plant's ancestry, in accordance with the familiar principle that ontogeny repeats phylogeny. The application of this generalization to the systematic botany of phaenogams is suggestive.

If we may trust Dr. Jackson's conclusions, the peculiar early leaves of *D. binata* would indicate the derivation of this species from *D. rotundifolia* through a series of plants the character leaves of which were successively triangular, obreniform, crescent-shaped, and finally elongated in two parts as at the present day.

Seedlings of *D. rotundifolia* have early leaves like *D. anglica* (a spatulate-leaved form), according to Sir John Lubbock; and this would imply the historical priority of the latter species or type over *D. rotundifolia* and *D. binata*.

The primitive leaves of *D. filiformis* (fig. 5), probably indicate the origin of this species from the progenitors of *D. rotundifolia*.

Interpreting the vestigial foliage of the above-mentioned *Drosera* species in this way we look back to a common archetype possessing elongated leaves. One line of descendants has kept this character, another has reduced the spread of blade to a minimum, in the filiform condition, while a third at first shortened and expanded the blade to orbicular and subsequently has modified this form into the curious double-forked linear leaf of *D. binata*.

With regard to the second point of interest, the young plants of *D. binata* precisely correspond to the description of the seedlings of the same species as given by Lubbock. The series of odd-shaped leaves serves to exhibit the noteworthy fact that individuals adventitiously derived parallel at all stages those derived from the egg-cell. With, of

course, such differences in the very earliest period as differences in mode and place of origin implies. The seedling, taking its rise from the ovary, manifests by its atavistic traits a youthfulness and freshness of life, a lack of well-formed character, and yet a racial stability. In plants originating from a quite different organ — and, in cases, tissue — of the plant-body, we find an equal rejuvenescence and equal adherence to hereditary tendencies. This seems to offer little support to a theory of distinct and localized germ-plasm.

NORTH EASTON.

EXPLANATION OF PLATE 10. — Fig. 1-4, *Drosera binata*. Fig. 5, *D. filiformis*. Fig. 6, *D. rotundifolia*.

## THE LOCAL FLORAS OF NEW ENGLAND.

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(Continued from page 196.)

RHODE ISLAND.

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218. **Collins, James Franklin.** NOTES ON THE RHODE ISLAND FLORA. Bull. Torr. Club, xx. 1893, pp. 240-243. Select. spec., technic. treatm. *phaenog.*